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PANEL SYSTEM FOR FORMING POURED CONCRETE WALLS

BACKGROUND OF THE INVENTION

I. FIELD OF THE INVENTION

The present invention relates generally to a panel system for forming poured concrete walls and, more particularly, to such a system for forming a brick ledge.

II. DESCRIPTION OF RELATED ART

There are many previously known panel systems for forming poured concrete walls. Furthermore, a number of these previously known systems utilize reusable aluminum panels.

In these previously known aluminum panel systems, the panels are generally rectangular in shape having a top, a bottom and two spaced-apart sides. Aluminum framing members are provided around the periphery of the panel, and typically one or more cross braces extend laterally and/or longitudinally along the panel. An aluminum sheet is secured to one side of the framing members so that one side of the panel is planar. The aluminum panels, furthermore, are detachably locked together to create the form used for pouring the concrete wall. After the concrete wall has set, the panels are removed from each other and the poured wall and thereafter reused.

Many buildings, and particularly residential homes, include walkout basements. In these situations, at least a portion of the poured concrete wall is oftentimes covered with brick for aesthetic purposes. Furthermore, the amount of brick used on the exterior surface of these poured concrete walls will vary as

a function of the amount of the poured concrete wall that would be exposed by the contour of the land but for the brick.

In order to support the brick on the exterior surface of the poured concrete walls, it has been previously necessary to create a brick ledge on the poured concrete wall which is equal in width to the width of a conventional brick, i.e. approximately four inches. The actual vertical position of the brick ledge along the panel will, of course, vary depending on the land contour around the poured concrete wall. Traditionally, since brick is much more expensive than concrete, the brick ledge is formed at or slightly below the level of the land.

In order to form these previously known brick ledges, Styrofoam, lumber, plastic, treated cardboard or the like is typically screwed, nailed or otherwise secured to the inside of the outer concrete forming panel so that the lower edge of the material is positioned at the desired level of the brick ledge. Consequently, during a concrete pouring operation, the Styrofoam, lumber, etc. used to form the brick ledge displaces the concrete during the concrete pouring operation in the desired fashion.

A primary disadvantage of this previously known method for forming brick ledges, however, is that it is time consuming and difficult to attach the wood, Styrofoam or the like to the aluminum panels in order to form the brick ledge. This, of course, increases the overall construction costs for forming the poured concrete wall.

A still further disadvantage of these previously known methods for creating a brick ledge in a poured concrete wall is that the materials used to form the ledge, i.e. the lumber, Styrofoam, plastic, treated cardboard and/or the like, increase the material costs for the panel system. Furthermore, these materials used to create the brick ledge typically cannot be reused in subsequent concrete pouring operations and, instead, are simply discarded. As such, the material costs of these materials directly increase the cost of forming the concrete wall with the brick edge.

SUMMARY OF THE PRESENT INVENTION

The present invention provides an aluminum panel forming system which overcomes all of the above-mentioned disadvantages of the previously known systems.

In brief, the panel forming system of the present invention comprises a first and second panel, both of which are generally rectangular in shape. Furthermore, each panel includes outer framing members around the periphery of the panel while an aluminum sheet is secured across one side of the framing members so that the aluminum sheet for each panel lies in a predetermined plane with respect to its panel.

A brick ledge form includes both a first and second adjacent section, each of which are generally planar. Furthermore, each section of the brick ledge form includes an upper surface and a bottom surface.

The bottom surface of the first section of the brick ledge form is secured to the top of the first or lower panel so that the second section of the

brick ledge form extends laterally outwardly from and lies in a plane generally perpendicular to the plane of the aluminum sheet on the first panel. Thereafter, the bottom of the second panel is positioned on the top surface of the second section of the brick ledge form. In doing so, the plane of the aluminum sheet on the second panel lies in a plane parallel to, but spaced away from, the plane of the aluminum sheet on the first panel by a predetermined distance. This predetermined distance corresponds to the width of a conventional brick, typically about four inches.

The vertical length of the first and second panels will vary depending upon the desired vertical positioning of the brick ledge form relative to the bottom of the poured concrete wall. Typically, however, the overall total height of both the first and second panels is a preset amount, for example nine feet.

In a conventional fashion, a generally rectangular interior concrete forming panel is positioned relative to the first and second panels so that the plane of the interior panel is parallel to, but spaced inwardly from, both the plane of the first panel as well as the plane of the second panel. The space in between the interior panel and the first panel, however, is greater than the space in between the interior panel and the second panel by the predetermined amount corresponding to the width of a conventional brick. The interior panel is then secured to both the first and second panels by conventional ties in order to complete the concrete pouring panel system.

BRIEF DESCRIPTION OF THE DRAWING

A better understanding of the present invention will be had upon reference to the following detailed description, when read in conjunction with the accompanying drawing, wherein like reference characters refer to like parts throughout the several views, and in which:

FIG. 1 is a side view illustrating a building constructed by using preferred embodiment of the invention;

FIG. 2 is a fragmentary sectional view taken alone line 2-2;

FIG. 3 is a fragmentary elevated view of the preferred embodiment of the invention;

FIG. 4 is a fragmentary exploded elevational view of a preferred embodiment of the invention; and

FIG. 5 is a fragmentary sectional side view of the preferred embodiment of the invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT OF THE PRESENT INVENTION

With reference first to FIGS. 3 and 5, a portion of a panel system 10 for forming poured concrete walls is shown and includes both an outer panel assembly 12 as well as an inner panel 14. As described in greater detail hereinafter, the outer panel assembly 12 and inner panel 14 are spaced apart from each other thus forming a cavity 16 therebetween. This cavity is designed to receive concrete during a wall pouring operation.

The outer panel assembly 12 is positioned on the exterior of a building relative to the inner panel 14 and includes a first panel 20 and a second panel 22. The first panel 20 includes a top 24, bottom 26 and spaced-apart and parallel sides 28. The panel 20 includes a plurality of aluminum frame members 30 which extend around the periphery of the panel 20 and define the rectangular shape and size of the panel 20. Additionally, one or more cross members 32, also made of aluminum, typically extend between the aluminum frame members 30 to rigidify and strengthen the panel 20.

An aluminum sheet 36 is secured across one side of the panel framing members 30 and cross members 34 so that the panel 36 lies in a predetermined first plane. Furthermore, in use, the panel 36 is positioned such that one side of the sheet 36 faces the cavity 16 which receives the poured concrete.

The second panel 22 is essentially identical to the first panel 20 except for the vertical height of the second panel 22 and includes a top 44, bottom 46 and spaced-apart sides 48. Consequently, the second panel 22 also includes aluminum frame members 40 which extend around the outer periphery of the panel 22 and define both the shape and size of the panel 22. Cross members 42, also made of aluminum, typically extend either between the frame members 40, or between other cross members 42, to rigidify and strengthen the second panel 22. An aluminum sheet 45 is secured across one side of the frame members 40 and cross members 42 such that the aluminum sheet 45 lies in a predetermined plane. One side of this aluminum sheet 44 faces the interior cavity 16.

Although the first panel 20 and second panel 22 are similar to each other, they may vary in height relative to each other, i.e. the distance between their respective tops and bottoms. However, the combined height of both the first panel 20 and second panel 22 is preferably a preset amount, for example nine feet.

With reference now particularly to FIGS. 3-5, the system 10 further includes an elongated aluminum brick ledge form 50 having an overall length equal to the length of the top 24 of the first panel 20. The brick ledge form 50 further includes a first elongated section 52 and a second elongated section 54 which is adjacent the first section 52. Both brick ledge form sections 52 and 54 are generally planar in shape.

As best shown in FIG. 5, the first section 52 of the brick ledge form 50 includes both a top surface 56 and a bottom surface 58. Similarly, the second section 54 of the brick ledge form 50 also includes a top surface 60 as well as a bottom surface 62. Furthermore, preferably the bottom surface 58 of the first section 52 is substantially coplanar with the top surface 60 of the second section 54.

A plurality of circular openings 70 are provided at spaced intervals along the first section 52 of the brick ledge form 50. At least some of these openings 70 register with like-shaped openings 72 in the frame member 30 which extends alone the top of the first panel 20.

The brick ledge form 50 is detachably secured to the first panel 20 in any conventional fashion. However, in the preferred embodiment, pins 80

(FIG. 5) are inserted through the registering holes 70 and 72 in the brick ledge form 50 and first form 20. These pins 80 include a cross slot while a wedge 84 extending through the cross slot detachably locks the brick ledge form 50 and first panel 20, together.

Once the first section 52 of the brick ledge form 50 is secured to the top 24 of the first form 20, the second section 54 of the brick ledge form 50 extends laterally outwardly from the first form 20 and in a plane generally perpendicular to the plane of the aluminum sheet 36 on the first form 20. Thereafter, as shown in FIGS. 3 and 5, the frame member 40 extending along the bottom 46 of the second form 22 is positioned on the top surface 60 of the second section 54 of the brick ledge form 50 so that the second form 22 is supported by the brick ledge form 50. In doing so, the plane of the aluminum sheet 44 of the second form 22 is parallel to the plane of the aluminum sheet 36 of the first form 20, but spaced apart from it by a predetermined distance. This predetermined distance corresponds to the width of a conventional brick, i.e. approximately four inches.

The first form 20 and second form 22 are then secured to the interior form 14 by conventional ties and the concrete wall is then formed by pouring concrete into the cavity 16. After the concrete has set, the panels 20, 22 and 14 as well as the brick ledge form 50 are removed from the poured wall. In doing so and as best shown in FIGS. 1 and 2, the brick ledge form 50 forms a brick ledge 100 along the exterior surface of the concrete wall which is thereafter

used to support bricks 102. Furthermore, as best shown in FIG. 1, the height of the brick ledge 100 will vary in accordance with the contour of the land 104.

From the foregoing, it can be seen that the present invention provides a panel system for forming poured concrete walls in which a brick ledge can be easily formed at a desired vertical distance from the bottom of the concrete wall by merely changing the vertical height of the first and second panels 20 and 22. Furthermore, the brick ledge form 50 can be reused on subsequent jobs whenever desired.

Having described my invention, however, many modifications thereto will become apparent to those skilled in the art to which it pertains without deviation from the spirit of the invention as defined by the scope of the appended claims.

I claim: